

ABSTRACT

A method for calculating available power of a battery includes steps of calculating an equivalent charge resistance at a current charge current, a current SOC (state of charge), and a current battery temperature using predetermined equivalent charge resistance data, calculating an effective no-load charge voltage at the current charge current, the current SOC, and the current battery temperature using predetermined effective no-load charge voltage data, calculating a maximum charge current based on the equivalent charge resistance, the effective no-load charge voltage, and a predetermined maximum charge voltage, and calculating available charge power based on the maximum charge current, the predetermined maximum charge voltage, and a predetermined battery maximum current. A system for executing the method is also disclosed.